

# ABSTRACT

## Multiple-User CDMA Wireless Communication System

A receiver for CDMA signals, in which data intended for transmission to  
 5 multiple intended receivers is spread by respective orthogonal spreading  
 codes and scrambled by an aperiodic random scrambling code, includes a  
 processing branch for each of a number of base stations from which the  
 receiver may pick up CDMA signals. Each processing branch performs both  
 10 channel equalisation based on a set of weights for that branch, and a  
 decoding operation. The outputs of the branches are combined to produce a  
 combined signal which is used both for determining the data intended for the  
 receiver, and in a feedback loop to improve the sets of weights. The receiver  
 is reliable even in the presence of mutipath fading and during soft handover.

15 Fig. 3(a)